

51. The method of Claim 37 wherein the antibody or fragment thereof binds to a soluble osteoprotegerin binding protein.

52. A method of inhibiting osteoclastogenesis in a mammal comprising administering a modulator of an osteoprotegerin binding protein, wherein the modulator is an antibody or fragment thereof which binds an osteoprotegerin binding protein.

53. The method of Claim 52 wherein the antibody or fragment thereof is an antagonist antibody.

54. The method of Claim 52 wherein the antibody is a monoclonal antibody or fragment thereof.

55. The method of Claim 52 wherein the antibody is a recombinant antibody or fragment thereof.

56. The method of Claim 52 wherein the antibody is a chimeric antibody or a CDR-grafted antibody.

57. The method of Claim 52 wherein the antibody is a human antibody or fragment thereof

58. The antibody or fragment of Claim 57 which is prepared by immunization of a transgenic animal capable of producing human antibodies.

59. The method of Claim 52 wherein the antibody or fragment thereof binds to an epitope on the extracellular domain or to an epitope on a fragment of the extracellular domain of an osteoprotegerin binding protein.

60. The antibody or fragment of Claim 59 wherein the epitope comprises the BB' loop of an osteoprotegerin binding protein.

61. The antibody or fragment of Claim 59 wherein the epitope comprises the EF loop of an osteoprotegerin binding protein.

62. The method of Claim 52 wherein the antibody or fragment thereof binds to a membrane associated form of osteoprotegerin binding protein.

63. The method of Claim 52 wherein the antibody or fragment thereof binds to a soluble osteoprotegerin binding protein.

64. The method of Claim 52 wherein the antibody or fragment further comprises a composition comprising a pharmaceutically acceptable diluent, carrier, solubilizer, emulsifier, preservative and/or adjuvant.

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65. (new) The method of any of Claims 52-64 further comprising administering a bone morphogenic factor selected from the group consisting of BMP-1 to BMP-12, transforming growth factor- β , a transforming growth factor- β family member, a fibroblast growth factor selected from the group consisting of FGF-1 to FGF-10, an interleukin-1 inhibitor, a TNF α inhibitor, parathyroid hormone, an E series prostaglandin, a bisphosphonate, or a bone-enhancing mineral.

66. The method of any of Claims 52-64 wherein osteoclastogenesis is associated with a condition selected from the group consisting of osteoporosis, osteomyelitis, hypercalcemia, osteopenia brought on by surgery or steroid administration, Paget's disease, osteonecrosis, bone loss due to rheumatoid arthritis, periodontal bone loss, osteopenia due to immobilization, prosthetic loosening and osteolytic metastasis.
